



Priority in Service Quality

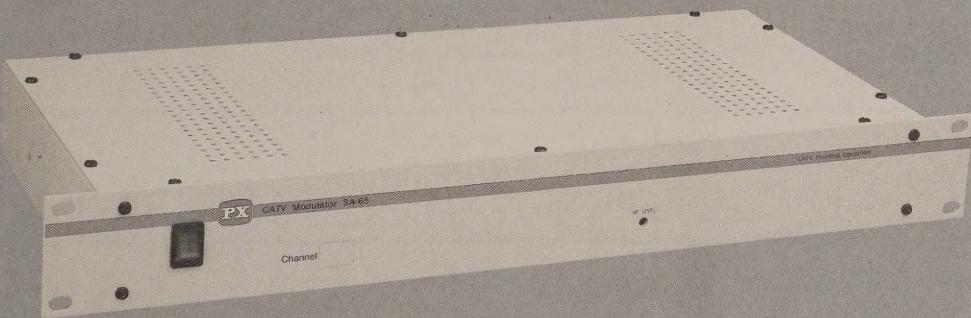
CABLE TV SYSTEMS



# MODEL: SA-65

## CATV/SMATV MODULATOR

**Microprocessor Controlled  
Double PLL & SMT Module Patent Design**



**SA-65**

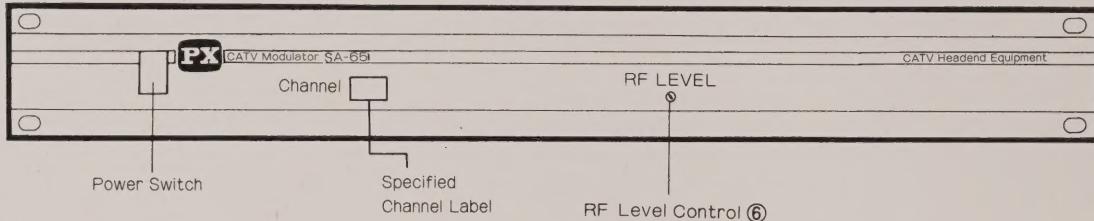
### **FEATURES:**

1. SA-65 CATV Modulator is ideally suited as headend modulator for Cable TV System, Satellite TV System and Hotel TV System.
2. Advanced microprocessor control and SMT module with Double PLL patent design to ensure state-of-the-art performance and reliability.
3. High isolation, prevents interference or "ghosting" when adjacent channels are used.
4. Built-in amplifier to get Max.output level 100dB<sub>u</sub>.
5. Separated Video/Audio/RF level control to present the best picture & audio quality.
6. Built-in advanced voltage regulation circuit to make best performance.
7. All standard VHF and CATV channels Available for ordering.

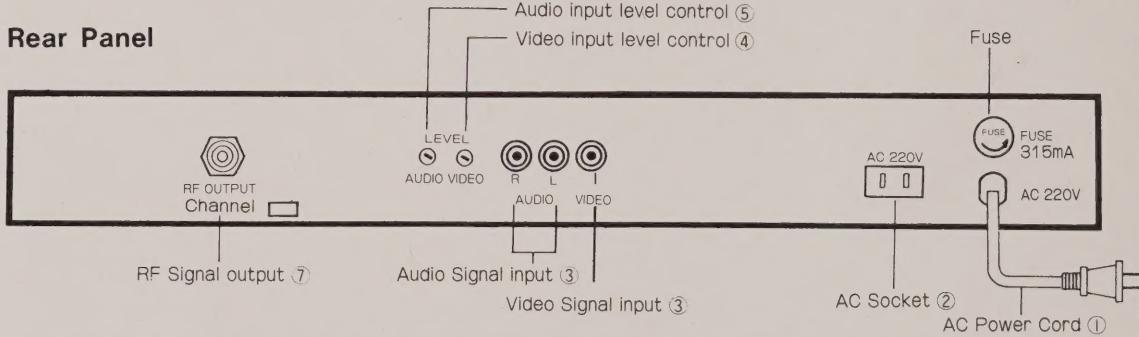
# INSTALLATION

## SA-65 Functional Diagram

### Front Panel



### Rear Panel



## SA-65 Connection and Adjustment

1. Plug the AC Power Cord into the AC outlet.
  2. The AC Socket may supply paralleled AC power source for another unit plug in. (not through the inner fuse and power switch)
  3. The Video Signal input and Audio Signal input terminals for connect with Satellite Receiver, VCR, Laser Disc or any other AV output devices. Audio(R,L) are provided for stereo input, if Audio is for MONO system, it may connect with either R or L.
  4. The VIDEO LEVEL Control is used for adjusting the Video Signal input level.
  5. The AUDIO LEVEL Control is used for adjusting the Audio Signal input level.
  6. The RF LEVEL Control is used for adjusting the RF Signal output level.
  7. The RF OUTPUT terminal is to connect SA-65 output with system combiner (CN-550).
- Note: SA-65 has to be equiped in a 19 inches standard equipment cabiner also in an air-conditioned and well ventilated room.

## SA-65 Accessories:

1. RF Cable.....1 Pcs. (For SA-65 RF Output to connect with System Combiner CN-550)
2. AV Cable.....1 Pcs. (For SA-65 Video/Audio input to connect with Satellite Receiver, VCR or other AV Devices)

## SA-65 Output Channel Chart (NTSC SYSTEM)

Channel Indicator	Channel No.	Video (MHz)	Audio (MHz)
02	2	55.25	59.75
03	3	61.25	65.75
04	4	67.25	71.75
05	5	77.25	81.75
06	6	83.25	87.75
07	7	175.25	179.75
08	8	181.25	185.75
09	9	187.25	191.75
10	10	193.25	197.75
11	11	199.25	203.75
12	12	205.25	209.75
13	13	211.25	215.75
14	A	121.25	125.75
15	B	127.25	131.75
16	C	133.25	137.75
17	D	139.25	143.75
18	E	145.25	149.75
19	F	151.25	155.75
20	G	157.25	161.75
21	H	163.25	167.75
22	I	169.25	173.75
23	J	217.25	221.75
24	K	223.25	227.75
25	L	229.25	233.75
26	M	235.25	239.75
27	N	241.25	245.75
28	O	247.25	251.75

Channel Indicator	Channel No.	Video (MHz)	Audio (MHz)
29	P	253.25	257.75
30	Q	259.25	263.75
31	R	265.25	269.75
32	S	271.25	275.75
33	T	277.25	281.75
34	U	283.25	287.75
35	V	289.25	293.75
36	W	295.25	299.75
37	AA	301.25	305.75
38	BB	307.25	311.75
39	CC	313.25	317.75
40	DD	319.25	323.75
41	EE	325.25	329.75
42	FF	331.25	335.75
43	GG	337.25	341.75
44	HH	343.25	347.75
45	II	349.25	353.75
46	JJ	355.25	359.75
47	KK	361.25	365.75
48	LL	367.25	371.75
49	MM	373.25	377.75
50	NN	379.25	383.75
51	OO	385.25	389.75
52	PP	391.25	395.75
53	QQ	397.25	401.75
54	RR	403.25	407.75

Channel Indicator	Channel No.	Video (MHz)	Audio (MHz)
55	SS	409.25	413.75
56	TT	415.25	419.75
57	UU	421.25	425.75
58	VV	427.25	431.75
59	WW	433.25	437.75
60	XX	439.25	443.75
61	YY	445.25	449.75
62	ZZ	451.25	455.75
63	AAA	457.25	461.75
64	BBB	463.25	467.75
65	CCC	469.25	473.75
66	DDD	475.25	479.75
67	EEE	481.25	485.75
68	FFF	487.25	491.75
69	GGG	493.25	497.75
70	HHH	499.25	503.75
71	III	505.25	509.75
72	JJJ	511.25	515.75
73	KKK	517.25	521.75
74	LLL	523.25	527.75
75	MMM	529.25	533.75
76	NNN	535.25	539.75
77	OOO	541.25	545.75
78	PPP	547.25	551.75
79	QQQ	553.25	557.75
80	RRR	559.25	563.75
81	SSS	565.25	569.75

## SA-65 Output Channel Chart (PAL B SYSTEM)

Channel Indicator	Channel No.	Video (MHz)	Audio (MHz)
02	2	48.25	53.75
03	3	55.25	60.75
04	4	62.25	67.75
05	5	175.25	180.75
06	6	182.25	187.75
07	7	189.25	194.75
08	8	196.25	201.75
09	9	203.25	208.75
10	10	210.25	215.75
11	11	217.25	222.75
12	12	224.25	229.75
13	S3	119.25	124.75
14	S4	126.25	131.75
15	S5	133.25	138.75
16	S6	140.25	145.75
17	S7	147.25	152.75
18	S8	154.25	159.75
19	S9	161.25	166.75
20	S10	168.25	173.75
21	S11	231.25	236.75

Channel Indicator	Channel No.	Video (MHz)	Audio (MHz)
22	S12	238.25	243.75
23	S13	245.25	250.75
24	S14	252.25	257.75
25	S15	259.25	264.75
26	S16	266.25	271.75
27	S17	273.25	278.75
28	S18	280.25	285.75
29	S19	287.25	292.75
30	S20	294.25	299.75
31	S21	303.25	308.75
32	S22	311.25	316.75
33	S23	319.25	324.75
34	S24	327.25	332.75
35	S25	335.25	340.75
36	S26	343.25	348.75
37	S27	351.25	356.75
38	S28	359.25	364.75
39	S29	367.25	372.75
40	S30	375.25	380.75
41	S31	383.25	388.75

Channel Indicator	Channel No.	Video (MHz)	Audio (MHz)
42	S32	391.25	396.75
43	S33	399.25	404.75
44	S34	407.25	412.75
45	S35	415.25	420.75
46	S36	423.25	428.75
47	S37	431.25	436.75
48	S38	439.25	444.75
49	S39	447.25	452.75
50	S40	455.25	460.75
51	S41	463.25	468.75
52	21	471.25	476.75
53	22	479.25	484.75
54	23	487.25	492.75
55	24	495.25	500.75
56	25	503.25	508.75
57	26	511.25	516.75
58	27	519.25	524.75
59	28	527.25	532.75
60	29	535.25	540.75
61	30	543.25	548.75

(Note: SA-65 output is single fixed channel, specify channel desired when ordering)

# SA-65 CATV/SMATV MODULATOR

## SPECIFICATION:

### VIDEO

Input Type	Composite PAL or NTSC
Input Level	1V P-P $\pm 10\%$ (For 75% $\pm 10\%$ modulation)
Max. Video Modulation Depth	87.5% (Input level at 1V P-P)
Differential Gain	DG 5%
Differential Phase	DP 5° max
Video to Noise Ratio	50 dB nom.
Frequency Response	$\pm 1$ dB (30Hz – 5MHz)
Video Input Impedance	75Ω

### AUDIO

Audio Input Level	0.45V $\pm 10\%$ (For 30–46K modulation)
Audio Input Impedance	47K
Audio to Noise Ratio	50 dB nom
Frequency Response	$\pm 1.5$ dB (50 Hz–15KHz)

### RF

Output Channel PAL B: NTSC :	CH2–CH12, CH S3–CH S41, CH21–CH30 CH2–CH13, CH14–CH-81 (Any standard VHF and CATV channels)
Output Level	+40 dBmV (100 dB $\mu$ V)
Output level Control Range	10 dB Continuously Variable
Video to Audio Carrier Ratio	20 $\pm 2$ dB
Frequency Accuracy	$\pm 20$ KHz
Spurious Modulation	>60dB (47–570MHz)
Output Impedance	75 Ω
VSWR (output)	1.3–1.5 nom.

### GENERAL

Temperature Range	5°C–40°C
Dimensions	480(W)x200(D)x56(H)mm
Weight	3.6kg
Power Requirements	AC 220V $\pm 10\%$ /50Hz or AC 110V $\pm 10\%$ /60Hz, 15W